

IN THE CLAIMS

1. (Original) A method of manufacturing a composite material comprising:
forming a mixture comprising a plurality of fibers and a borazine oligomer;
subjecting the mixture to a first heating, for 12 hours to 56 hours; and
subjecting the mixture to a second heating;
wherein the temperature of the first heating is 60 °C to 80 °C, and the
pressure during the first heating is at least 0.5 MPa,
the temperature of the second heating is at most 400 °C, and the greatest
pressure of the second heating is at least 15 MPa.
2. (Original) The method of claim 1, further comprising subjecting the
mixture to a third heating, wherein the temperature of the third heating is at least 1200
°C.
3. (Original) The method of claim 1, wherein the borazine oligomer is
obtained by heating borazine for 24 to 48 hours, at a temperature of 60 °C to 80 °C.
4. (Original) The method of claim 1, wherein the fibers are carbon fibers.
5. (Original) The method of claim 1, wherein the pressure during the first
heating is 1 MPa to 6 MPa.
6. (Original) The method of claim 1, wherein the temperature of the first
heating is 65 °C to 75 °C, and the pressure during the first heating is 1.5 MPa to 5 MPa.
7. (Original) The method of claim 1, wherein the temperature of the first
heating is 68 °C to 72 °C, and the pressure during the first heating is 2.0 MPa to 4.6
MPa.
8. (Original) The method of claim 1, wherein the temperature of the second
heating is increased at a rate of 0.25 °C/min to 3 °C/min.

9. (Original) The method of claim 1, wherein the temperature of the second heating is increased at a rate of 0.75 °C/min to 1.25 °C/min.

10. (Original) The method of claim 1, wherein the temperature of the second heating is increased at a rate of 0.9 °C/min to 1.1 °C/min.

11. (Original) The method of claim 1, wherein the greatest temperature reached during the second heating is 130 °C to 170 °C, and the greatest pressure is 12 MPa to 32 MPa.

12. (Original) The method of claim 1, wherein the greatest temperature reached during the second heating is 140 °C to 160 °C, and the greatest pressure is 16 MPa to 26 MPa.

13. (Original) The method of claim 1, wherein the greatest temperature reached during the second heating is 148 °C to 152 °C, and the greatest pressure is 21 MPa to 23 MPa.

14-16. (Cancelled)

17. (Currently amended) A The method of claim 4, wherein the composite material ~~comprising~~ comprises carbon fibers in a boron nitride matrix, ~~wherein~~ and the composite material has a density of at least 1.62 g/cc.

18. (Currently amended) The ~~composite material~~ method of claim 17, wherein the composite material has a density of 1.62 to 1.75 g/cc.

19. (Currently amended) A The method of claim 4, wherein the composite material ~~comprising~~ comprises carbon fibers in a boron nitride matrix, ~~wherein~~ and the composite material has a wear rate of at most 0.4 mg/m at an energy level of 100 kJ/kg to 1100 kJ/kg, and a coefficient of friction of at least 0.22 at an energy level of 100 kJ/kg to 1200 kJ/kg.

20. (Original) A method of manufacturing a composite material comprising boron nitride, comprising:

forming a mixture comprising a preform and a borazine oligomer;
subjecting the mixture to a first heating, for 12 hours to 56 hours; and
subjecting the mixture to a second heating;
wherein the temperature of the first heating is 60 °C to 80 °C, and the
pressure of the first heating is at least 0.5 MPa, and
the temperature of the second heating is at most 400 °C, and the greatest
pressure of the second heating is at least 15 MPa.

21. (Original) The method of claim 20, further comprising subjecting the mixture to a third heating, wherein the temperature of the third heating is at least 1200 °C.

22. (Original) The method of claim 20, wherein the borazine oligomer is obtained by heating borazine for 24 to 48 hours, at a temperature of 60 °C to 80 °C.

23. (Original) The method of claim 20, wherein the preform is a 3D needled carbon fiber preform.

24. (Original) The method of claim 20, wherein the preform is a CVI-infiltrated 3D needled carbon fiber preform.

25-26. (Cancelled)

27. (Currently amended) A The method of claim 23, wherein the composite material comprising comprises a 3D needled carbon fiber preform impregnated with boron nitride having a density of at least 1.63 g/cc.

28. (Currently amended) The ~~composite material~~ method of claim 27, wherein the composite material has having a density of 1.63 g/cc to 1.72 g/cc.

29. (Currently amended) A The method of claim 24, wherein the composite material, comprising comprises a CVI-infiltrated carbon fiber preform impregnated with boron nitride having a density of at least 1.62 g/ cc.

30. (Currently amended) The ~~composite material~~ method of claim 29, wherein the composite material has having a density of 1.62 to 1.80 g/cc.

31. (Currently amended) A The method of claim 23, wherein the composite material ~~comprising~~ comprises a 3D needled carbon fiber preform impregnated with boron nitride having a wear rate of at most 0.05 mg/m at an energy level of 100 kJ/kg to 1000 kJ/kg, and a coefficient of friction of at least 0.12 at an energy level of 100 kJ/kg to 900 kJ/kg.

32-37. (Cancelled)